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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,669	02/24/2000	Ulrike Jeck-Prosch	32140-153023	5754

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EXAMINER
CLEVELAND, MICHAEL B

ART UNIT	PAPER NUMBER
1762	18

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/512,669	JECK-PROSCH ET AL.	
	Examiner	Art Unit	
	Michael Cleveland	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 43-59* is/are pending in the application.

4a) Of the above claim(s) *1-9 and 57-59* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *43-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 2/15/02 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/512669 is acceptable and a CPA has been established. An action on the CPA follows.

Election/Restrictions

2. In the parent case of the CPA, election was required between method claims and composition claims for the reasons given in Paper No. 2. Applicant expressly elected without traverse to prosecute the method claims in Paper No. 4. Applicant has canceled the prior method claims but replaced them with new method claims 43-56. Previous composition claims 1-9 remain in the case, and Applicant has added new composition claims 57-59. Therefore, Applicant has presented claims drawn only to inventions claimed in the original application. The CPA is designated as a continuation, and Applicant has not indicate that a shift in election is desired. Accordingly, prosecution is being continued on the invention elected and prosecuted by Applicant in the prior application. Therefore, composition claims 1-9 and 57-59 are withdrawn from consideration.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 43-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 43 and 44: The phrases "said granules of a mono-, di-, and tri-basic propellant" and "said mono-, di-, and tri-basic propellant" are unclear because it does not appear that a propellant can be monobasic, dibasic, and tribasic. For purposes of applying art, the Examiner treated the claims as stating "mono-, di-, or tri-basic", as in the first clause and recommends so amending the claims.

Claim 44: It is unclear whether the providing, surface-treating, and recovering clauses are in addition to those of parent claim 43 or whether they merely further limit the steps of claim 43. The claim has been treated as inclusive of the latter possibility. It is unclear whether the "at least one polymer" is the inert polymer or the energetic polymer or another polymer. Based on the prior prosecution of the case, the Examiner has assumed that the term refers to the "inert polymer" of claim 43, and recommends amending the claim to clearly so state.

Claim 47: It is unclear whether the "at least one polymer" is the inert polymer or the energetic polymer or another polymer. Based on the prior prosecution of the case, the Examiner has assumed that the term refers to the "energetic polymer" of claim 43, and recommends amending the claim to clearly so state.

Claim 51: It is unclear whether "a polymer" refers to the inert polymer or the energetic polymer or another polymer. The Examiner has treated the term as inclusive of inert polymers and energetic polymers that satisfy the limitations of parent claim 43.

Claims 53 and 56: It is unclear whether "said polymer" refers to the inert polymer or the energetic polymer. The Examiner has treated the claims as inclusive of either.

Claim 55: It is unclear whether "said polymer" refers to the inert polymer or the energetic polymer or another polymer (See comment regarding "a polymer" in parent claim 51.). The Examiner has treated the claims as inclusive of either.

Claims 45-46, 48-50, 52, and 54 are rejected merely for the formal flaws of their parent claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 43-46, 48, and 50-56 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Meara et al. (U.S. Patent 5,682,009, hereafter '009).

Claims 43-44: '009 teaches providing a monobasic or dibasic propellant (col. 2, lines 54-64), mixing (i.e., surface treating) a propellant powder in slurry with at least one inert polymer (col. 2, lines 54-64; col. 5, lines 13-37), such as the cellulose esters listed in col. 4, lines 1-60, and drying the propellant (col. 5, lines 37-40) to recover particles treated with the reagent (col. 6, lines 36-48).

Claims 45-46: The propellant may include nitrocellulose (col. 1, lines 19-28) and nitroglycerin (col. 5, lines 8-10).

Claim 54: The inert polymer diffuses into the powder to form a coating (col. 5, lines 25-29).

Claims 43, 48, 50, and 53: Also, '009 teaches providing a monobasic propellant (col. 2, lines 54-64), mixing (i.e., surface treating) a propellant powder in slurry with nitroglycerin, an energetic, monomer softener (col. 5, lines 1-12), mixing (i.e., surface treating) at least one inert polymer (col. 5, lines 13-37), such as the cellulose esters listed in col. 4, lines 1-60, and drying the propellant (col. 5, lines 37-40) to recover particles treated with the reagent (col. 6, lines 36-48).

Claims 51-52: The mixing is performed by applying the polymer in an aqueous solution (col. 5, lines 13-22) and heating the solution over time and allowing the polymer to penetrate into the propellant grains (i.e., by incubating in an impregnating solution).

Claims 55-56: Because both the nitroglycerin and the deterrent diffuse into the propellant base, and therefore contact it, both are considered to be coatings in the broadest reasonable sense of the term.

7. Claims 43 and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Boileau et al. (U.S. Patent 5,174,837, hereafter '837).

'837 teaches providing a monobasic nitrocellulose propellant powder, coating (i.e., surface treating) with an energetic polymer (col. 3, lines 14-30) and recovering the particles by drying (col. 4, lines 53-64).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Meara '009 in view of Morse (U.S. Patent 3,811,358, hereafter '358).

'009 teaches adding nitroglycerin to a nitrocellulose to form a double base propellant powder, as described above. It does not teach adding an energetic polymer. However, '358 teaches that double base propellants are conventionally made from nitrocellulose and an explosive (i.e., energetic) plasticizer (of which nitroglycerine is the most commonly used) (col. 7, lines 3-19). However, it teaches that other equivalent plasticizers may be used, such as polyglycidyl nitrate (col. 7, lines 18-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used polyglycidyl nitrate instead of nitroglycerin as the energetic plasticizer in the double base powder of '009 with the expectation of similar results and with a reasonable expectation of success because '358 teaches the art-recognized suitability of polyglycidyl nitrate for the purpose of forming a double base propellant with nitrocellulose.

10. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Meara '009 in view of Lutz (U.S. Patent 5,520,757, hereafter '757).

'009 teaches adding nitroglycerin to a nitrocellulose to form a double base propellant powder, as described above. It does not teach adding an alkyl nitratoethyl nitramine (NENA). However, '757 teaches alkyl NENAs as advantageous replacements for nitroglycerin for the reasons given in col. 1, lines 15-54. The alkyl NENAs include compounds such as methyl NENA (col. 2, lines 51-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the nitroglycerin of '009 with the methyl NENA of '757 in order to have achieved the resistance to crystallization described in col. 1, lines 15-54 of '757 with a reasonable expectation of success.

Response to Arguments

11. Applicant's arguments filed 4/15/2002 have been fully considered but they are not persuasive.

Applicant argues that the form of the claims address the Examiner's criticism in the advisory action. The argument is unconvincing because it is unsupported by details. See the rejections under 35 USC 112, 2nd paragraph.

Applicant has presented new claims, but makes no attempt to point out their novelty. The claims are rejected under 35 USC 102 and 103, as stated above.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (703) 308-2331. The examiner can normally be reached on 8-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-3186 for regular communications and (703) 306-3186 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

MBC

MBC
May 15, 2002

SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
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